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PCT	For receiving Office use only
101	
	International Application No.
REQUEST	
	International Filing Date
The undersigned requests that the present	
international application be processed according to the Patent Cooperation Treaty.	Name of receiving Office and "PCT International Application"
	Applicant's or agent's file reference (if desired) (12 characters maximum)S03P0927WO00
Box No. I TITLE OF INVENTION MAGNETORESISTIVE DEVICE AND MAGNETIC	MEMORY APPARATUS
Box No. II APPLICANT This perso	on is also inventor
Name and address: (Family name followed by given name; for a legal en The address must include postal code and name of country. The country of Box is the applicant's State (that is, country) of residence if no State of residen	the address indicated in this 02 5 1 1 0 2 1 1 1
SONY CORPORATION	Facsimile No.
7-35, Kitashinagawa 6-chome, Shinagawa-ku, TOKYO 141-0001 3	03-5448-2244
	JAPAN Teleprinter No.
	Applicant's registration No. with the Office
State (that is, country) of nationality: JAPAN	State (that is, country) of residence: JAPAN
This person is applicant for the purposes of: all designated V all designated the United States	ted States except States of America only the States indicated in States of America only the States indicated in the Supplemental Box
Box No. III FURTHER APPLICANT(S) AND/OR (FURT	THER) INVENTOR(S)
Name and address: (Family name followed by given name; for a legal en The address must include postal code and name of country. The country of Box is the applicant's State (that is, country) of residence if no State of residen	the address indicated in this 1 ms person is:
OHBA Kazuhiro	V applicant and inventor
c/o SONY CORPORATION 7-35, Kitashinagawa 6-chome	
Shinagawa-ku, TOKYO 141-000	UI JAPAN
	Applicant's registration No. with the Office
State (that is, country) of nationality: JAPAN	State (that is, country) of residence: JAPAN
This person is applicant all designated all designated for the purposes of:	ted States except States of America only the United States the States indicated in the Supplemental Box
V Further applicants and/or (further) inventors are indicated	on a continuation sheet.

AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

The person identified below is hereby/has been appointed to act on behalf

Name and address: (Family name followed by given name; for a legal entity, full official designation.

The address must include postal code and name of country.)

12288 Attorney TSUNODA Yoshisue

Shinjuku Bldg., 8-1, Nishishinjuku 1-chome,

of the applicant(s) before the competent International Authorities as:

Shinjuku-ku,TOKYO 160-0023 JAPAN

Box No. IV

common representative

agent

Telephone No.

Facsimile No.

Teleprinter No.

03-3343-5821

03-3348-2746

Agent's registration No. with the Office

Sheet No.	

Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)							
If none of the following sub-boxes is used, this sheet should not be included in the request.							
Name and address: (Family name followed by given name; for a legal entity The address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residence	This person is: applicant only						
HOSOMI Masanori c/o SONY CORPORATION 7-35, Kitashinagawa 6-chome, Shinagawa-ku, TOKYO 141-0001	JAPAN	V applicant and inventor inventor only (If this check-box is marked, do not fill in below.)					
State (that is, country) of nationality: JAPAN	State (that is, country)	of residence: JAPAN					
This person is applicant all designated all designated for the purposes of:		the United States of America only the States indicated in the Supplemental Box					
Name and address: (Family name followed by given name; for a legal entity. The address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residence of color of the State of th	e address indicated in this is indicated below.)	This person is: applicant only V applicant and inventor inventor only (If this check-box is marked, do not fill in below.) Applicant's registration No. with the Office					
State (that is, country) of nationality: JAPAN	State (that is, country)	of residence: JAPAN					
This person is applicant for the purposes of: all designated the United States all designated the United States	States except tes of America	the United States of America only the States indicated in the Supplemental Box					
Name and address: (Family name followed by given name; for a legal entity The address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residence of Constant of Consta	e address indicated in this is indicated below.)	This person is: applicant only V applicant and inventor inventor only (If this check-box is marked, do not fill in below.) Applicant's registration No. with the Office					
State (that is, country) of nationality: JAPAN	State (that is, country)	of residence: JAPAN					
This person is applicant all designated all designated for the purposes of:	States except tes of America	the United States of America only the States indicated in the Supplemental Box					
Name and address: (Family name followed by given name; for a legal entity The address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residence of the Constant o	e address indicated in this	This person is: applicant only applicant and inventor inventor only (If this check-box is marked, do not fill in below.) Applicant's registration No. with the Office					
State (that is, country) of nationality: JAPAN	State (that is, country)	of residence: JAPAN					
This person is applicant all designated all designated		the United States of America only the States indicated in the Supplemental Box					
V Further applicants and/or (further) inventors are indicated or	another continuation	sheet.					

Sheet No	3	
Sheet No		

Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)						
If none of the following sub-boxes is used, this sheet should not be included in the request.						
Name and address: (Family name followed by given name; for a legal enti The address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residence	This person is: applicant only					
YAMAMOTO Tetsuya c/o SONY CORPORATION 7-35, Kitashinagawa 6-chome, Shinagawa-ku, TOKYO 141-0001	JAPAN	applicant and inventor inventor only (If this check-box is marked, do not fill in below.) Applicant's registration No. with the Office				
State (that is, country) of nationality: JAPAN	State (that is, country)) of residence: JAPAN				
		the United States of America only the States indicated in the Supplemental Box				
Name and address: (Family name followed by given name; for a legal entithe address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residence is constant to Sone Takayuki c/o Sony Corporation 7-35, Kitashinagawa 6-chome, Shinagawa-ku, Tokyo 141-0001	e address indicated in this e is indicated below.)	This person is: applicant only V applicant and inventor inventor only (If this check-box is marked, do not fill in below.) Applicant's registration No. with the Office				
State (that is, country) of nationality: JAPAN	State (that is, country,) of residence: JAPAN				
This person is applicant for the purposes of: all designated the United States all designated the United States	l States except ates of America	the United States of America only the States indicated in the Supplemental Box				
Name and address: (Family name followed by given name; for a legal entitude address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residence if no State of the country of the country of the applicant's State (that is, country) of residence if no State	This person is: applicant only V applicant and inventor inventor only (If this check-box is marked, do not fill in below.) Applicant's registration No. with the Office					
State (that is, country) of nationality: JAPAN	State (that is, country,	of residence: JAPAN				
This person is applicant for the purposes of: all designated the United States all designated the United States		the United States of America only the Supplemental Box				
Name and address: (Family name followed by given name; for a legal enti The address must include postal code and name of country. The country of the Box is the applicant's State (that is, country) of residence if no State of residence	ne address indicated in this	This person is: applicant only applicant and inventor inventor only (If this check-box is marked, do not fill in below.) Applicant's registration No. with the Office				
State (that is, country) of nationality:	State (that is, country)	of residence:				
This person is applicant all designated for the purposes of:	I States except ates of America	the United States of America only the States indicated in the Supplemental Box				
Further applicants and/or (further) inventors are indicated of	on another continuation	sheet.				

Sheet	Ma			4	
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Box No. V	DESIGNATION OF STATES		M	ark the applicable check-boxes below	; at	leas	one must be marked.
The follow	wing designations are hereby made u	ınder	Ru	le 4.9(a):		-	
Regional			_	• •			
		И C	"L	ia, KE Kenya, LS Lesotho, MW	` .	.1	i M7 Manambiana CD Co. 1
- A1	SL Sierra Leone, SZ Swaziland TZ	Unite	ed)	na, KE Kenya, LS Lesotno, MW Republic of Tanzania, UG Uganda, 2	M. M.S	72W	nhia ZW Zimhahwe and any other
	State which is a Contracting State of	of the	Ha	rare Protocol and of the PCT (if oth	er	kind	of protection or treatment desired,
	specify on dotted line)						
				nijan, BY Belarus, KG Kyrgyzstan, I			
	RU Russian Federation, TJ Tajikist	an, T	M	Turkmenistan, and any other State w	vhi	h is	a Contracting State of the Eurasian
	Patent Convention and of the PCT						_
☑ EP	European Patent: AT Austria, BE	Belgi	un	n, BG Bulgaria, CH & LI Switzerland	d aı	nd Li	echtenstein, CY Cyprus, CZ Czech
	Republic, DE Germany, DK Denm	ark, E	Œ	Estonia, ES Spain, FI Finland, FR	Fra	nce,	GB United Kingdom, GR Greece,
	nu nungary, ik ireland, i'i italy, L Si Slovenia SK Slovekia TD Tumb	U LW	ken	nbourg, MC Monaco, NL Netherlan any other State which is a Contractin	ds,	PT F	ortugal, RO Romania, SE Sweden,
	and of the PCT	.cy, at	ıu i	my omer same which is a Contractin	ıg S	aie	or me European Patent Convention
		RI Re	nin	, CF Central African Republic, CG	· C-	mer	CI Côte d'Ivoire CM Comerces
	GA Gabon, GN Guinea, GQ Equat	torial	Gu	inea, GW Guinea-Bissau, ML Mal	i. N	ngo, IR N	Mauritania NE Niger SN Senegal
	TD Chad, TG Togo, and any other S	State v	win	ich is a member State of OAPI and a	Co	ntra	ting State of the PCT (if other kind
	of protection or treatment desired, i	specij	fy o	on dotted line)			
	Patent (if other kind of protection						
				Croatia			
	antigua and Barbuda	□в	Œ	Hungary			
	Albania					PH	Philippines
LI AM A	rmenia		L	Israel		PL	Poland
ATA	Austria		N	India			
	Australia					RO	Romania
				Japan			Russian Federation
BC F	Bulgaria		TP	Kyrgyzstan Democratic People's Republic			Seychelles Sudan
□ BR F	Brazil	A	•	of Korea			
				Republic of Korea			
□ BZ E	Belize	Пк	Z	Kazakhstan		SK	Slovakia
	Canada	\Box L	C	Saint Lucia			Sierra Leone
	LI Switzerland and Liechtenstein				_		Syrian Arab Republic
	China					TJ	Tajikistan
							Turkmenistan
	Costa Rica						Tunisia
	Cuba						Turkey
	Zzech Republic				L	TT	Trinidad and Tobago
	Germany				_	-	TI '. ID 11. Cm
	Denmark	L N	W				United Republic of Tanzania Ukraine
	Algeria	Пъ	AC.				Uganda
			/K	The former Yugoslav Republic of	F	TIE	United States of America
	Estonia			Macedonia			United States of America
_	Spain	\square N	A N	Mongolia		UZ.	Uzbekistan
	inland			/Malawi	Ē	vc	Saint Vincent and the Grenadines
	Jnited Kingdom						Viet Nam
· —	Grenada		ΛZ	Mozambique			Serbia and Montenegro
	Georgia						South Africa
l <u>—</u>				Norway	Ē		I Zambia
LJGM (Gambia	□ N	Z	New Zealand		ZΨ	Zimbabwe
Check-he	oxes below reserved for decignation	States	C 131	hich have become party to the PCT :	ъ Ф -	r inc	sance of this sheet:
				nave become party to the PC1	عيرية	4 122	MANUE OI UIIS SUCCE;
							unt also makes under Rule 4.9(b) all
other des	ignations which would be permitted	auuu Anu b	201 201	i to the designations made above, the	ap nd:	plica cate	int also makes under Rule 4.9(b) all in the Supplemental Box as being
excluded	from the scope of this statement. The	e appl	lica	nt declares that those additional design	gna	tions	are subject to confirmation and that
any desig	mation which is not confirmed befor	e the	exp	piration of 15 months from the priorit	ty d	ate is	to be regarded as withdrawn by the
applicant	at the expiration of that time limit. ((Confi	rm	ation (including fees) must reach the re	cei	ving	Office within the 15-month time limit.)

If the Supplemental Box is not used, this sheet should not be included in the request.

- If, in any of the Boxes, except Boxes Nos. VIII(i) to (v) for which
 a special continuation box is provided, the space is insufficient
 to furnish all the information: in such case, write "Continuation
 of Box No..." (indicate the number of the Box) and furnish the
 information in the same manner as required according to the
 captions of the Box in which the space was insufficient, in
 particular:
 - (i) if more than two persons are to be indicated as applicants and/or inventors and no "continuation sheet" is available: in such case, write "Continuation of Box No. III" and indicate for each additional person the same type of information as required in Box No. III. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below;
 - (ii) if, in Box No. II or in any of the sub-boxes of Box No. III, the indication "the States indicated in the Supplemental Box" is checked: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. III and No. III" (as the case may be), indicate the name of the applicant(s) involved and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is applicant;
 - (iii) if, in Box No. II or in any of the sub-boxes of Box No. III, the inventor or the inventor/applicant is not inventor for the purposes of all designated States or for the purposes of the United States of America: in such case, write "Continuation of Box No. II" or "Continuation of Box No. II" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the inventor(s) and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is inventor;
 - (iv) if, in addition to the agent(s) indicated in Box No. IV, there are further agents: in such case, write "Continuation of Box No. IV" and indicate for each further agent the same type of information as required in Box No. IV;
 - (v) if, in Box No. V, the name of any State (or OAPI) is accompanied by the indication "patent of addition," or "certificate of addition," or if, in Box No. V, the name of the United States of America is accompanied by an indication "continuation or "continuation-in-part": in such case, write "Continuation of Box No. V" and the name of each State involved (or OAPI), and after the name of each such State (or OAPI), the number of the parent title or parent application and the date of grant of the parent title or filing of the parent application;
 - (vi) if, in Box No. VI, there are more than five earlier applications whose priority is claimed: in such case, write "Continuation of Box No. VI" and indicate for each additional earlier application the same type of information as required in Box No. VI.
 - If, with regard to the precautionary designation statement contained in Box No. V, the applicant wishes to exclude any State(s) from the scope of that statement: in such case, write "Designation(s) excluded from precautionary designation statement" and indicate the name or two-letter code of each State so excluded.

[Continuation of Box No. IV]
11351 Attorney ISOYAMA Hironobu
Shinjuku Bldg., 8-1, Nishishinjuku 1-chome,
Shinjuku-ku, TOKYO 160-0023 JAPAN

Telephone No. 03-3343-5821 Facsimile No. 03-3348-2746

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Box No. VI PRIORITY	CLAIM			
The priority of the following	earlier application(s) is hereb	by claimed:		
Filing date	Number		Where earlier application	is:
of earlier application (day/month/year)	of earlier application	national application: country or Member of WTO	regional application:* regional Office	international application: receiving Office
item (1)				
07.08.02	P2002-230367	JAPAN		
item (2)				
item (3)				
item (4)				
item (5)				
Further priority claims	are indicated in the Supplem	nental Box.		
Box No. VII INTERNA Choice of International Sinternational search, indicated ISA / J.P. Request to use results of International Searching Au	tion is an ARIPO application, Member of the World Trade (ATIONAL SEARCHING A) Gearching Authority (ISA) (in the the Authority chosen; the to the arrive search; reference to thority):	indicate at least one count Organization for which tha UTHORITY if two or more Internationa wo-letter code may be used that search (if an earlier	I Searching Authorities at the search has been carried	re competent to carry out the out by or requested from the
Date (day/month/year)	Nu	mber Co	ountry (or regional Office	9)
Box No. VIII DECLAR	ATIONS			
The following declaration check-boxes below and in	ns are contained in Boxes No dicate in the right column the	os. VIII (i) to (v) (mark th mamber of each type of dec	e applicable laration):	Number of declarations
Box No. VIII (i)	Declaration as to the ide	entity of the inventor		:
Box No. VIII (ii)	Declaration as to the ap date, to apply for and b	pplicant's entitlement, as a e granted a patent	t the international filing	:
Box No. VIII (iii)	-	pplicant's entitlement, as ity of the earlier applicati		:
Box No. VIII (iv)	Declaration of inventor United States of Ameri	rship (only for the purpose ica)	es of the designation of the	ne :
Box No. VIII (v)	Declaration as to non-p	prejudicial disclosures or e	exceptions to lack of nov	elty :

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Choot NIo	,

Box No. IX CHECK LIST; LANGUAGE O	DK FILING	
This international application contains: (a) in paper form, the following number of	This international application is accompanied by the following item(s) (mark the applicable check-boxes below and indicate in right column the number of each item):	Number of items
sheets:	1. The fee calculation sheet	: 1
request (including declaration sheets) : 7	2. Y original separate power of attorney	: 1
description (excluding	3. Original general power of attorney	: '
sequence listings and/or	4. Topy of general power of attorney; reference number,	•
tables related thereto) : 29 claims : 1	if any:	: 2
abstract 1	5. statement explaining lack of signature	: -
drawings : 6	6. D priority document(s) identified in Box No. VI as	
	6. M priority document(s) identified in Box No. VI as item(s):	: 1
Sub-total number of sheets: 44 sequence listings:	7. Translation of international application into	
tables related thereto :	(language):	•
(for both, actual number of	or other biological material	:
sheets if filed in paper form, whether or not also filed in	9. sequence listings in computer readable form (indicate type and number of carriers)	
computer readable form; see (c) below)	(i) ☐ copy submitted for the purposes of international search unde Rule 13 <i>ter</i> only (and not as part of the international applicati	
Total number of sheets : 44 (b) only in computer readable form	(ii) ☐ (only where check-box (b)(i) or (c)(i) is marked in left column) additional copies including, where applicable, the copy for	
(Section 801(a)(i)) (i) sequence listings	purposes of international search under Rule 13 <i>ter</i> (iii) together with relevant statement as to the identity of the copy	:
(ii) tables related thereto	copies with the sequence listings mentioned in left column 10. tables in computer readable form related to sequence listings	:
(c) also in computer readable form (Section 801(a)(ii))	(indicate type and number of carriers) (i) copy submitted for the purposes of international search under	r
(i) ☐ sequence listings (ii) ☐ tables related thereto	Section 802(b-quater) only (and not as part of the internation application)	hal :
Type and number of carriers (diskette,	(ii) (only where check-box (b)(ii) or (c)(ii) is marked in left column)	-
CD-ROM, CD-R or other) on which are contained the	additional copies including, where applicable, the copy for t purposes of international search under Section 802(b-quater) : ·
sequence listings:	(iii) together with relevant statement as to the identity of the copy	or or
tables related thereto:	copies with the tables mentioned in left column	:
(additional copies to be indicated under items 9(ii) and/or 10(ii), in right column)	11. other (specify):	:
Figure of the drawings which should accompany the abstract:	Language of filing of the international application: Japanese	
	T, AGENT OR COMMON REPRESENTATIVE	
Next to each signature, indicate the name of the person sig	gning and the capacity in which the person signs (if such capacity is not obvious from readi	ng the request).
TSU	NODA Yoshisue(Seal)	
ISO	YAMA Hironobu(Seal)	
	For receiving Office was called	
Date of actual receipt of the purported	For receiving Office use only	
international application:	2. Dr	awings:
	1 1 1	eceived:
 Corrected date of actual receipt due to later timely received papers or drawings complet the purported international application: 	but ing	
4. Date of timely receipt of the required	r	ot received:
corrections under PCT Article 11(2):		
5. International Searching Authority (if two or more are competent): ISA /	GP 6. Transmittal of search copy delayed until search fee is paid	
	For International Bureau use only	
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Date of receipt of the record copy by the International Bureau:		•
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